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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Brynjulv Aas

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EXAMINER

KEE, FANNIE C

ART UNIT

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3679

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,698	Applicant(s) AAS, BRYNJULV	
	Examiner Fannie Kee	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because in Figures 5 and 10, the cross-hatching pattern is not in accordance with MPEP 608.02.
3. The drawings are also objected to because in Figures 7 and 12, there is extraneous written matter. The extraneous written matter should be designated by reference element numbers on the drawings whereas the description of those elements should be in the specification.
4. The drawings are further objected to because in Figures 7 and 12, separated elements within the same figure should either be connected by dotted lines or by brackets to designate all of the elements as one complete figure. Otherwise, each separate element should have a separate figure number designation.
5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the locking rings sliding in a radial and an axial direction on a shoulder must be shown or the features canceled from claim 2 (it

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appears that the locking rings only slide in an axial direction and not in a radial direction). No new matter should be entered.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the locking rings having teeth with straight flanks and notches with slanted sides at the sides facing the connection units must be shown or the features canceled from claim 3. No new matter should be entered.

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the locking rings having teeth with slanted flanks and notches with straight sides must be shown or the features canceled from claim 4. No new matter should be entered.

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the teeth and notches having a sufficient clearance to absorb possible small deformations of the locking rings must be shown or the features canceled from claim 5. No new matter should be entered.

9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

10. The abstract of the disclosure is objected to because of the use of legal phraseology, i.e., “is characterized in that it” in line 2; and, because of minor grammatical errors, i.e., add the word --of-- between the words "number" and "teeth" in line 3 and add the word --an-- between the words "in" and "axial" in line 5.

Correction is required. See MPEP § 608.01(b).

11. The disclosure is objected to because of the following informalities:

- a. Page 4, lines 21-22 – replace the words “second and first ring” with --first and second rings--.
- b. Page 4, lines 27 – replace “dyslocation” with --dislocation--.
- c. Page 5, line 18 – replace “unit” with --units--.

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- d. Page 6, lines 1-1 – What does Applicant mean by “together form a 10, 59° sector of the ring’s edge”?

Correction is required.

12. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- e. Claim 2 - the locking rings sliding in a radial and an axial direction on a shoulder.
- f. Claim 3 - the locking rings having teeth with straight flanks and notches with slanted sides at the sides facing the connection units.
- g. Claim 4 - the locking rings having teeth with slanted flanks and notches with straight sides.
- h. Claim 5 - the teeth and notches having a sufficient clearance to absorb possible small deformations of the locking rings.

Correction is required.

Claim Objections

13. Claim 1 is objected to because of the following informalities: Claim 1 needs to be re-written according to 37 CFR 1.75(i) - where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation..

Correction is required.

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14. Claim 1 is also objected to because of the following informalities: delete the word "of" after the word "locking" in line 1; add the word --a-- before the word "male threaded section" in line 3; and, add the word --an-- before the words "axial direction" at the beginning of line 19.

Correction is required.

15. Claim 2 is objected to because of the following informalities: add the word --a-- before the word "radial" and the word --the-- before the word "axial" in line 3.

Correction is required.

16. Claim 6 is objected to because of the following informalities: delete the word "of" after the word "locking" in line 1; replace the word "to" before the word "engagement" with --into-- in line 10; add the word --an-- before the words "axial direction" and add the word --and,-- at the end of the sentence in line 14; and, add the word --the-- before the words "axial direction" in line

16.

Correction is required.

17. Claim 7 is objected to because of the following informalities: add the word --the-- before the words "axial direction" in line 3.

Correction is required.

18. Note: It is suggested to Applicant to remove references to the drawing element numbers in the claims to avoid confusion in the claims.

Claim Rejections - 35 USC § 112

19. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, the claim is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors.

For example, how are the two rings locked together? If the two rings are spread apart in an axial direction, there is nothing to keep them from continuing to spread, therefore, the system falls apart and there is no arrangement that locks these two rings together. However, Applicant is claiming that the rings are spread apart and still engaged together? How is this possible?

Another example is that it appears that Applicant is claiming an arrangement of two locking rings capable of connecting to two connection units. It does not appear that Applicant is claiming the two connections units as Applicant has not positively recited the connection units.

Further, Applicant claims an arrangement for locking and then additionally claims "the locking arrangement". However, these appear to be two separate inventions. Which one is Applicant claiming?

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Applicant also claims “the locking arrangement comprising a first (1) and a second (2) locking ring, with a first and a second side,”. Is Applicant claiming that *each* locking ring has a first side and a second side or that only the second locking ring has a first side and second side? This is not clear in the claim.

Claim 1 also recites “characterized in that the first and second side of the locking rings comprise teeth and intermediate notches, wherein the first (1) and second (2) ring engage each other with corresponding teeth (4, 5) on their first sides and that each of the two rings (1, 2) has a different number of notches and teeth (3, 6) formed on their second sides”. Applicant appears to be claiming that both the first and second sides of the locking rings have both teeth and intermediate notches. Is that the case? If this is the case, then shouldn't the first and second locking rings engage each other with corresponding teeth and notches and not just teeth? Also, here apparently Applicant is claiming that both locking rings have first and second sides. Applicant needs to claim this as such if this is the case as it is unclear what Applicant is trying to claim.

Examiner will interpret all of the claim limitations of claim 1 as best understood by Examiner.

Claim 2 recites “characterized in that the locking rings (1, 2) are arranged to slide in radial and axial direction on a shoulder (15, 16) on the connection units (7, 8)”. How are the locking rings sliding in both a radial and an axial direction? The locking rings appear to move in an axial direction but do not appear to move in a radial direction. Examiner is interpreting that

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as long as the locking rings are capable of moving in a radial direction then this claim limitation has been met.

Claim 2 also recites the limitation "a shoulder on the connection units". There is no antecedent basis for this claim as the connection units are elements which have not been positively recited.

Claim 4 recites the limitation " the connection units". There is no antecedent basis for this claim as the connection units are elements which have not been positively recited.

Claim 5 recites "characterized in that the teeth (3, 6, 9, 10) and the notches (11, 12) which engage each other are formed with a sufficient clearance to absorb possible small deformations of the locking rings (1, 2)". Is Applicant trying to say that the teeth and notches are each separately formed with sufficient clearances or that there is a sufficient clearance formed after the teeth and notches are engaged with each other? It is not clear what Applicant is claiming. Examiner is interpreting that Applicant is trying to say that the teeth and notches are formed such that after engagement there is a sufficient clearance formed.

Claim 6 recites the limitation "on a shoulder of the connection units". There is no antecedent basis for this claim as the connection units are elements which have not been positively recited.

Claim Rejections - 35 USC § 102

21. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

22. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Myers et al U.S. Patent No. 4,655,482.

With regard to claim 1, and as best understood by Examiner, Myers et al disclose an arrangement for locking of threaded pipe connections wherein two connection units are threaded and provide a female and male threaded section, respectively, which are screwed together, the locking arrangement comprising a first (42) and a second (44) locking ring, with a first and a second side, which lock the connection units radially with respect to each other, characterized in that the first and second side of the locking rings comprise teeth and intermediate notches, wherein the first (42) and second (44) ring engage each other with corresponding teeth (56, 62) on their first sides and that each of the two rings (42, 44) has a different number of notches and teeth (74, 84, 86) formed on their second sides, which two second sides, facing their respective connection units are formed to engage a corresponding number of notches and teeth formed on a shoulder at the facing edge of the connection units after the rings (42, 44) are spread apart in axial direction and, at the same time, the mutual engagement between the first (42) and second (44) ring is maintained.

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With regard to claim 2, and as best understood by Examiner, Myers et al disclose the locking rings (42, 44) being arranged to slide in radial and axial direction on a shoulder on the connection units.

With regard to claim 3, and as best understood by Examiner, Myers et al disclose the locking rings (42, 44) being provided with teeth that have straight flanks, and notches with slanted sides at the sides facing the connection units.

With regard to claim 4, and as best understood by Examiner, Myers et al disclose the connection units being provided with teeth with slanted flanks, and notches with straight sides.

With regard to claim 5, and as best understood by Examiner, Myers et al disclose the teeth and the notches which engage each other being formed with a sufficient clearance to absorb possible small deformations of the locking rings.

With regard to claim 6, and as best understood by Examiner, Myers et al disclose a method for locking of threaded pipe connections utilizing the arrangement according to claim 1, characterized in the following steps;

- arranging two locking rings (42, 44) which engage each other via teeth (56, 62) and notches on their first sides, on a shoulder of the connection units,
- screwing the connection units together,

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- bringing the teeth (74, 84, 86) and notches of the second sides of the locking rings (42, 44) to engagement with the notches and teeth of the connection units after screwing the connection units together,

- spreading the rings (42, 44) apart in axial direction,

- locking the locking rings (42, 44) with respect to each other in axial direction by means of locking devices (88).

With regard to claim 7, and as best understood by Examiner, Myers et al disclose the locking rings (42, 44) being manually spread apart in axial direction, and are locked by means of locking bolts (88).

Conclusion

23. Wiggins, Cerbin, Obrecht, Bynum, Sampson '724, and Sampson '197 are being cited to show examples of the general mechanical state of the art with regard to arrangements for locking.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fannie Kee whose telephone number is (571) 272-1820. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron M Dunwoody/
Primary Examiner, Art Unit 3679

/F. K./
Examiner, Art Unit 3679
February 9, 2009